Key-type Selector Switches

A30NK

30-mm dia. Key-type Selector Switches Control panel miniaturization through a more compact design and modified wiring direction. Addition of Push-In Plus terminal blocks for easy wiring.

Workability and safety improvements.



- You can connect up to three Contact Blocks in one stage for multistage expansion. (Screw terminal block type)
- Screw terminal structure is compatible with round crimp terminals. (Screw terminal block type)
- The terminals can be secured even when a contact block is mounted. (Screw terminal block type)
- Contact Blocks can be attached in any direction for easy assembly.

Safety

- Easy-to-operate lock lever for secure locking.
- Easy-mounting Contact Blocks provide finger protection.
- No loose connections of wiring means maintenance-free use. (Push-In Plus terminal block type)

Product Lineup

• The buttons and bezels come in a wide variety of colors and shapes.

Refer to Safety Precautions for All Pushbutton Switches/
Indicators and Safety Precautions on page 88.

List of Models

Screw Terminal Blocks/Push-In Plus Terminal Blocks

Brushed metal bezels

A30NK

Two Positions

Three Positions





- Specifications: Refer to page 60.
- Dimensions: Refer to page 80.
- Accessories and tools: Refer to pages 84 to 85.
- Characteristics: Refer to page 79
- Subassemblies (Common): Refer to page 82.
- Precautions for correct use: Refer to pages 88 to 99.

Model Number Structure

Model Number Legend ----- Shipped as a set that includes the Operation Unit, Mounting Collar, and Contact Block. For information on combinations, refer to *Ordering Information* on page 76.

Model Numbers for Sets

(1) Type

(4) Key Number

Code	Туре
K	Key-type Selector Switch

Code	No.
01	No.1

(2) Number of Positions and Bezel Material

Code	No. of positions	Bezel material
2M	2	Brushed metal
ЗМ	3	Brushed metal

(3) Reset Method

Code	Reset method							
М	Manual	Two- positions manual						
	Ivianuai	Three- positions manual						
L	Automatic reset on left	Two- positions automatic						
		Three- positions left automatic						
R	Automatic reset on right	Three- positions right automatic						
В	Automatic reset on left and right	Three- positions left or right automatic						

(5) Key Release Position

Code	Release position	Two positions	Three positions
Α	All positions		
В	Left	•	
С	Right	• 0	•
D	Center		•
G	Left and right		

O: Release position •: Locked position

* The key can only be removed when in the free position for automatic reset models.

(6) Degree of Protection

Code	Protection
Α	Conforming to IP66, NEMA13

(7) Contacts and Terminals Specifications

Code Specification						
	G General/Screw Terminal Block					
	Р	General/Push-In Plus Terminal Block				

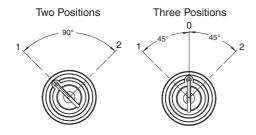
(8) Contact Configuration

Code	Contact Blocks		Unit	Unit position		Two	Three positions
	NO	NC	1	2	3	positions	positions
100	1	0	NO			Yes	
002	0	1			NC	Yes	
101	2	0	NO		NO	Yes	Yes
102	1	1	NO		NC	Yes	Yes
201	1	1	NC		NO		Yes
202	0	2	NC		NC	Yes	Yes
110	2	0	NO	NO			Yes
111	3	0	NO	NO	NO	Yes	Yes
112	2	1	NO	NO	NC	Yes	Yes
210	1	1	NC	NO			Yes
211	2	1	NC	NO	NO		Yes
212	1	2	NC	NO	NC		Yes
011	2	0		NO	NO		Yes
012	1	1		NO	NC		Yes
120	1	1	NO	NC			Yes
121	2	1	NO	NC	NO		Yes
122	1	2	NO	NC	NC	Yes	Yes
220	0	2	NC	NC			Yes
221	1	2	NC	NC	NO		Yes
222	0	3	NC	NC	NC	Yes	Yes
021	1	1		NC	NO		Yes
022	0	2		NC	NC		Yes

Note: 1. NO (blue): Normally open, NC (orange): Normally closed.

2. Refer to the following figure for Unit positions.

Operation Angle



- Specifications: Refer to page 60.
- Dimensions: Refer to page 80.
- Accessories and tools: Refer to pages 84 to 85.
- Characteristics: Refer to page 79.
- Subassemblies (Common): Refer to page 82.
- Precautions for correct use: Refer to pages 88 to 99.

A30NK

Ordering Information

Model Numbers for Sets --- Shipped as a set that includes the Operation Unit, Mounting Collar, and Contact Block. **Two-position, Key-type Selector Switches**

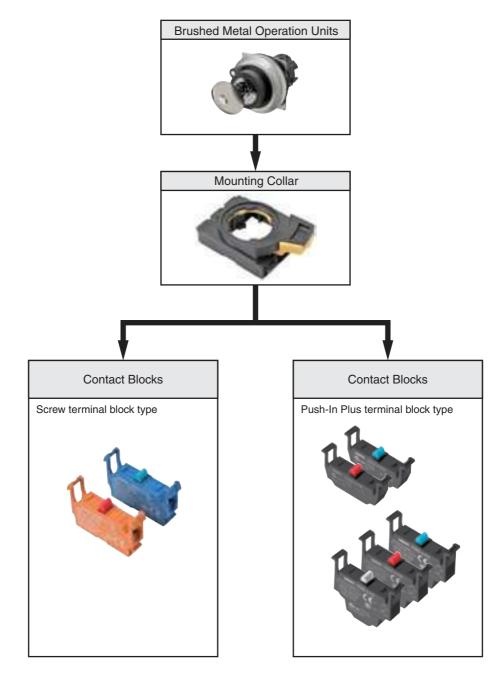
Appearance	Bezel material	No. of outputs	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration
Brushed metal bezels		4	A30NK-2M(3)-01(5)A-G(8)(8)(8)			100
brusileu metai bezeis	2M	'	A30NK-2M(3)-01(5)A-P(8)(8)(8)	M:Manual L:Automatic reset on left	A: All positions B: Left C: Right	002
		2 M	A30NK-2M(3)-01(5)A-G(8)(8)(8)			102 101
			A30NK-2M(3)-01(5)A-P(8)(8)(8)			202
		3	A30NK-2M(3)-01(5)A-G(8)(8)(8)			111 222
			A30NK-2M(3)-01(5)A-P(8)(8)(8)			122 112

Three-position, Key-type Selector Switches

Appearance	Bezel material	No. of outputs	Model	(3) Reset method	(5) Key release positions	(8)(8)(8) Contact configuration
Brushed metal bezels	3M 3	2 3M	A30NK-3M(3)-01(5)A-G(8)(8)(8)	M: Manual L: Automatic reset on left R: Automatic reset on right B: Automatic reset on left and right	A: All positions B: Left C: Right D: Center G: Left and right	110 011 101 220 022 202
			A30NK-3M(3)-01(5)A-P(8)(8)(8)			120 102 210 201 012 021
		3	A30NK-3M(3)-01(5)A-G(8)(8)(8)			111 222 122 212
			A30NK-3M(3)-01(5)A-P(8)(8)(8)			221 211 121 112

Ordering Information

Subassemblies ---- Order Operation Units, Mounting Collars, and Contact Blocks individually. The same Mounting Collars and Contact Blocks are also used for the A22N Series.



- Specifications: Refer to page 60.
- Dimensions: Refer to page 80.
- Accessories and tools: Refer to pages 84 to 85.
- Characteristics: Refer to page 79.
- Subassemblies (Common): Refer to page 82.
- Precautions for correct use: Refer to pages 88 to 99.

A30NK

Subassemblies - - - - Order Operation Units, Mounting Collars, and Contact Blocks individually. The same Mounting Collars and Contact Blocks are also used for the A22N Series.

Operation Units

	Bezel material and shape	Brushed metal	(5) Key release positions
No. of positions	Reset method	Model	
2	Manual	A30NZ-2MM-01(5)A	A: All positions B: Left
2	Automatic reset on left	A30NZ-2ML-01(5)A	C: Right
	Manual	A30NZ-3MM-01(5)A	A. All marking
3	Automatic reset on left	A30NZ-3ML-01(5)A	A: All positions B: Left C: Right
	Automatic reset on right	A30NZ-3MR-01(5)A	D: Center G: Left and right
	Automatic reset on left and right	A30NZ-3MB-01(5)A	G. Lon and right

Specifications

Certified Safety Standard Ratings

UL 508 (File No. E76675), CSA C22.2 No.14

6 A 240 VAC, 10 A 120 VAC TÜV (EN60947-5-1)

AC-15 3 A 240 VAC

DC-13 4 A 24 VDC CCC (GB14048.5)

AC-15 3 A 240 VAC

DC-13 4 A 24 VDC

Application Standards

UL1059 and UL486E (Push-In Plus terminal block type)

Ratings

Contacts (Standard Load)

Rated insulation volta	age	600 V					
Rated carry current		10 A	10 A				
Rated voltage		24 V	120 V	240 V	380 V	440 V	
AC at 50/60 Hz	Resistive load (AC-12)	10 A	10 A	6 A	2A	2 A	
AC at 50/60 HZ	Inductive load (AC-15)	10 A	6 A	3 A	1.9 A	1.6 A	
DC	Resistive load (DC-12)	8 A	2.2 A	1.1 A			
	Inductive load (DC-13)	4 A	1.1 A	0.55 A			

Note: 1. The above ratings were obtained by conducting tests under the following conditions.

- (1) Ambient temperature: 20 ±2°C
- (2) Ambient humidity: 65% ±5% RH
- (3) Operating frequency: 30 operations/minute
- 2. Minimum applicable load: 10 mA at 5 VDC.

Specifications (When Operation Unit, Mounting Collar, and Contact Blocks Are Combined)

Characteristics

Allowable operating frequency Mechanical Electrical 30 operations/minute max. Insulation resistance 100 MΩ min. (at 500 VDC) Contact resistance 100 mΩ max. (initial value) Between terminals of same polarity¹¹ 2,500 VAC at 50/60 Hz for 1 min Vibration resistance Malfunction 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms) Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Durability Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Ambient operating temperature² -25 to 70°C Ambient storage temperature²² -40 to 80°C Degree of protection ¹3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination (application environment) 3 (EN 60947-5-1)	Item	Туре	Key-type Selector Switches		
frequency Electrical 30 operations/minute max. Insulation resistance 100 MΩ min. (at 500 VDC) Contact resistance 100 mΩ max. (initial value) Dielectric strength Between terminals of same polarity¹¹ 2,500 VAC at 50/60 Hz for 1 min Wibration resistance Malfunction 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms) Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor $\cos \theta = 0.4$) Ambient operating temperature²² -25 to 70°C Ambient storage temperature²² -40 to 80°C Degree of protection³³ Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 2 (FN 60047.5.1)	Allowable operating	Mechanical	30 operations/minute max.		
Contact resistance 100 mΩ max. (initial value) Dielectric strength Between terminals of same polarity¹¹ 2,500 VAC at 50/60 Hz for 1 min Wibration resistance Malfunction 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms) Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Durability Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature¹² -25 to 70°C Ambient storage temperature¹² -40 to 80°C Degree of protection⁻³ Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination		Electrical	30 operations/minute max.		
Between terminals of same polarity¹ 2,500 VAC at 50/60 Hz for 1 min Wibration resistance Malfunction 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms) Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature¹² -25 to 70°C Ambient storage temperature¹² -40 to 80°C Degree of protection¹³ Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination	Insulation resistance		100 M Ω min. (at 500 VDC)		
Dielectric strength Of same polarity*1 2,500 VAC at 50/60 Hz for 1 min Between each terminal and ground 2,500 VAC at 50/60 Hz for 1 min Vibration resistance Malfunction 10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms) Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature*2 -25 to 70°C Ambient storage temperature*2 -40 to 80°C Degree of protection*3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 2, (EN 60047, 5, 1)	Contact resistance		100 m Ω max. (initial value)		
Setween each terminal and ground 2,500 VAC at 50/60 Hz for 1 min	Dialoctric strongth		2,500 VAC at 50/60 Hz for 1 min		
Shock resistance Malfunction 1,000 m/s² max. (malfunction within 1 ms) Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature*2 -25 to 70°C Ambient storage temperature*2 -40 to 80°C Degree of protection*3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 2 (EN 60047.5.1)	Dielectric Strength		2,500 VAC at 50/60 Hz for 1 min		
Mechanical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) Durability 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature*2 -25 to 70°C Ambient storage temperature*2 -40 to 80°C Degree of protection*3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 3 (FN 60047 5.1)	Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)		
Durability Electrical 500,000 operations min. (Switches with 3 positions: 300,000 operations min.) (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4) Ambient operating temperature*2 -25 to 70°C Ambient operating humidity 35% to 85% RH Ambient storage temperature*2 -40 to 80°C Degree of protection*3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 2 (FN) 60047.5.1)	Shock resistance	Malfunction	1,000 m/s ² max. (malfunction within 1 ms)		
Electrical (250 VAC, 3 A, with an inductive load having power factor cos θ = 0.4)		Mechanical	500,000 operations min. (Switches with 3 positions: 300,000 operations min.)		
Ambient operating humidity Ambient storage temperature* -40 to 80°C Degree of protection* Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) Degree of contamination (2) (FNI 60047 5.1)	Durability	Electrical			
Ambient storage temperature*2 —40 to 80°C Degree of protection*3 — Conforming to IP66 Electric shock protection class — Class II PTI (tracking characteristic) — 175 Degree of contamination — 2 (FN 60047.5.1)	Ambient operating te	mperature*2	-25 to 70°C		
Degree of protection '3 Conforming to IP66 Electric shock protection class Class II PTI (tracking characteristic) 175 Degree of contamination 2 (FN 60047 5.1)	Ambient operating hu	ımidity	35% to 85% RH		
Electric shock protection class Class II PTI (tracking characteristic) Degree of contamination 2 (EN 60047 5.1)	Ambient storage tem	perature*2	-40 to 80°C		
PTI (tracking characteristic) 175 Degree of contamination 2 (FN 60047.5.1)	Degree of protection*	3	Conforming to IP66		
Degree of contamination 3 (FN 60047.5.1)	Electric shock protection class		Class II		
	PTI (tracking characteristic)		175		
			3 (EN 60947-5-1)		
Weight Approx. 75 g (for 1NC/1NO)	Weight		Approx. 75 g (for 1NC/1NO)		

^{*1.} Push-In Plus terminal block type: 1,000 VAC at 50/60 Hz for 1 min.

Operating Characteristics (for SPST-NO/SPST-NC)

Туре	Key-type Selector Switches			
Item	Manual reset	Automatic reset		
Total travel force (torque) (maximum TTF)	0.6 N·m	0.6 N·m		
Total travel (TT)	2 positions: Approx. 90°, 3 positions: Approx. 45°			
Resetting force (torque) (RF)	0.5 N·m max.			

Examples of Linked Contact Blocks (Screw terminal block type)

Examples of Linked Contact Blocks (Screw terminal block type)							
	Key-type Selector Switches						
	2 positions	3 positions					
Linking example	Operation Unit Mounting Collar	Operation Unit Mounting Collar					

Note: If you increase the number of Contact Blocks, evaluate the Switch under actual working conditions before permanent installation and use the Switch within a number of switching operations that will not adversely affect the Switch's performance.

^{*2.} With no icing or condensation.
*3. Degree of protection from the front of the panel.

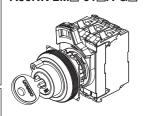
A30NK

Dimensions (Unit: mm)

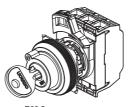
Key-type Selection Switches

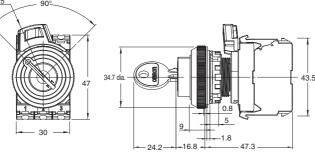
Two-position Switches with Brushed Metal Bezels A30NK-2M \square -01 \square A-G \square

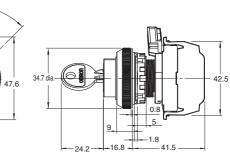
A30NK-2M□-01□A-P□





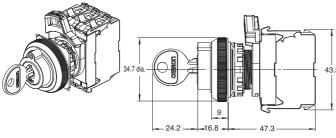




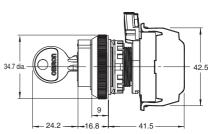


Three-position Switches with Brushed Metal Bezels A30NK-3M□-01□A-G□

A30NK-3M□-01□A-P□

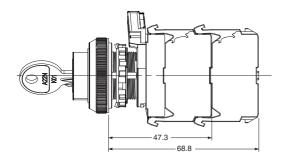


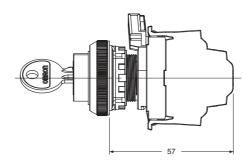




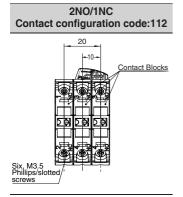
Depth with Linked Units (Screw terminal block type)

Depth when a double-contact unit is mounted (Push-In Plus terminal block type)

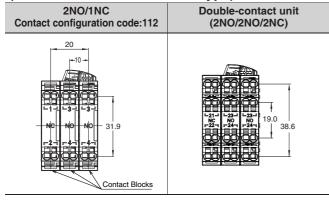




Terminal Arrangement BOTTOM VIEW (Screw terminal block type)



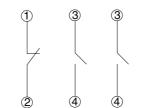
BOTTOM VIEW (Push-In Plus terminal block type)



Terminal Connection Diagrams

2NO/1NC Contact configuration code:112

Bottom View



Subassemblies (Common)

Ordering Information

Subassemblies--- You can order Operation Units, LED Lamps, Mounting Collars, and Contact Blocks individually. Use them in combination for models that are not available as assembled Units. These can also be used as inventory for maintenance parts.

LED Lamps

	Rated voltage		Model					
Appearance	Color	6 VAC/DC	12 VAC/DC	24 VAC/DC	100/110/120 VAC	200/220/230/240 VAC		
	Red	A22NZ-L-RA	A22NZ-L-RB	A22NZ-L-RC	A22NZ-L-RD	A22NZ-L-RE		
	Green	A22NZ-L-GA	A22NZ-L-GB	A22NZ-L-GC	A22NZ-L-GD	A22NZ-L-GE		
	Yellow	A22NZ-L-YA	A22NZ-L-YB	A22NZ-L-YC	A22NZ-L-YD	A22NZ-L-YE		
	White	A22NZ-L-WA	A22NZ-L-WB	A22NZ-L-WC	A22NZ-L-WD	A22NZ-L-WE		
	Blue	A22NZ-L-AA	A22NZ-L-AB	A22NZ-L-AC	A22NZ-L-AD	A22NZ-L-AE		
	Orange	A22NZ-L-OA	A22NZ-L-OB	A22NZ-L-OC	A22NZ-L-OD	A22NZ-L-OE		

Mounting Collar

Appearance	Model
	A22NZ-H-01

Contact Blocks

Appearance	Terminals Specifications	Contacts	Model
	Screw terminal block	SPST-NO (blue)	A22NZ-S-G1A
	Screw terminal block	SPST-NC (orange)	A22NZ-S-G1B
		SPST-NO (blue)	A22NZ-S-P1A
	Push-In Plus terminal block	SPST-NC (red)	A22NZ-S-P1B
		DPST-NO (blue)	A22NZ-S-P2A
	Push-In Plus terminal block	DPST-NC (red)	A22NZ-S-P2B
		SPST-NO/SPST-NC (white)	A22NZ-S-P2C

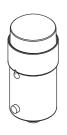
Lighting Units

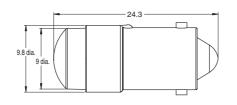
Appearance	Terminals Specifications	Rated voltage	Model
A		6 VAC/DC	A22NZ-T-A
1 lane		12 VAC/DC	A22NZ-T-B
	Screw terminal block	24 VAC/DC	A22NZ-T-C
C		100/110/120 VAC	A22NZ-T-D
		200/220/230/240 VAC	A22NZ-T-E
		6 VAC/DC	A22NZ-T-AP
	Push-In Plus terminal block	12 VAC/DC	A22NZ-T-BP
		24 VAC/DC	A22NZ-T-CP
		100/110/120 VAC	A22NZ-T-DP
		200/220/230/240 VAC	A22NZ-T-EP

Subassemblies (Common)

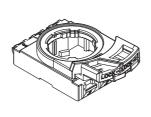
Dimensions (Unit: mm)

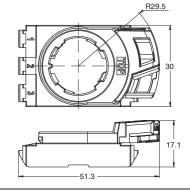
LED Lamps A22NZ-L-□□





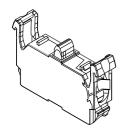
Mounting Collar A22NZ-H-01

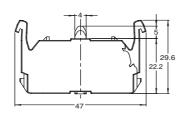




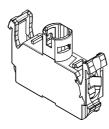
Screw terminal block

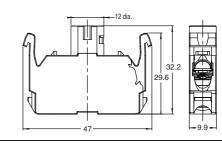
Contact Blocks A22NZ-S-G1□





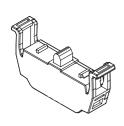
Lighting Units A22NZ-T-□

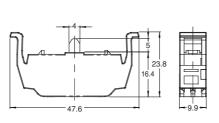




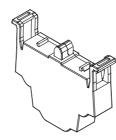
Push-In Plus Terminal Blocks

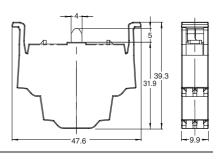
Contact Blocks (Single Contact)
A22NZ-S-P1□



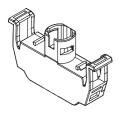


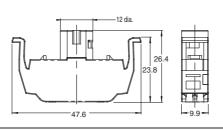
Contact Blocks (Double Contact) A22NZ-S-P2□





Lighting Units A22NZ-T-□P





Accessories and Tools

A22N/M22N/A30N

Ordering Information

Accessories and Tools (Order Separately)

	Item	Appearance	Classi	fication	Model	Remarks				
Pi	rotective Cover		-		A22NZ-A-303	A protector designed to prevent incorrect operation. Cannot be used together with other accessories. (Rubber seal included.) For exclusive use with panel cutouts of 22.3 and 25.5 mm dia. Key-type selector switches cannot be used.				
Р	lastic Hole Plug *		Ro	und	A22NZ-A-401	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 3.0 mm				
М	etal Hole Plug *		Ro	und	A22NZ-A-402	Can be plugged into precut panel holes for future expansion. Applicable panel thickness: 0.8 to 6.0 mm (Rubber seal included.)				
Lo	ock Ring *		Round		A22NZ-A-403	Used when a more secure lock is required to prevent rotation inside the Operation Unit. (Rubber seal included.)				
Lo	ock Ring	Ö							A22NZ-A-50501	Used when a more secure lock is required to prevent rotation of the Operation Unit.
R	einforcement Plate	000			A22NZ-A-C01	Used to reinforce Contact Blocks and Lighting Units, Refer to page 95 for mounting instructions.				
K	еу	NECTY	-		A22NZ-K-01	Used with a key-type selector switch.				
С	ontrol Box *	0.	1 1	nole	A22NZ-A-B01Y					
_			Suitable Cable	7 to 9 dia.	A22Z-3500-1	Plastic connector used to extend a cable from the				
C	onnector		Diameter (mm)	9 to 11 dia.	A22Z-3500-2	switch box. Refer to page 98 for details.				
			For flat	models	A22Z-3600F	Used to prevent dust or water from entering the Operation Unit.				
S	Sealing Caps		For project	tion models	A22Z-3600T	Color: opaque Material: silicon				
_	- · 		For full-gu	ard models	A22Z-3600G	For exclusive use with panel cutouts of 22.3 and 25.5 mm dia. Knob-type and key-type selector switches cannot be used.				
	esin Attachment for) dia. *		Round		Round		A22Z-A30	Use when mounting to a panel with a 30-dia. hole. Refer to page 99 for details. Purchase and mount a separate Lock Ring when using an indicator.		

^{*} For 22.3-mm panel hole diameter.

Safety Precautions

Key-type Selector Switches Subassemblies
A30N (Common)

Accessories and Tools

Ordering Information

Item	Appearance	Classification	Model	Remarks
Small Legend Plate Frame *		Black	A22NZ-A-50103	Legend Plate with no text on black background included.
			A22Z-3443B	Black
		AAPile e I I e I	A22Z-3443R	Red
		Without text	A22Z-3443W	White
			A22Z-3443C	Transparent
		O	A22Z-3443R-2	White text on red background
		STOP	A22Z-3443R-4	write text on red background
Small Legend Plates			A22Z-3443B-1	
(Standard Size) *		START	A22Z-3443B-3	
		ON	A22Z-3443B-5	
		OFF	A22Z-3443B-6	White text on black background
		UP	A22Z-3443B-7	Willie text off black background
		DOWN	A22Z-3443B-8	
		POWER ON	A22Z-3443B-9	
		OFF-ON	A22Z-3443B-10	
Large Legend Plate Frame *	B	Black	A22NZ-A-51103	Legend Plate with no text on black background included.
	_		A22Z-3453B	Black
Large Legend Plates *		Without text	A22Z-3453R	Red
Large Legend Plates		without text	A22Z-3453W	White
			A22Z-3453C	Transparent
Tightening Wrench	0		A22NZ-A-301	Used to tighten Mounting Nuts from the back of the panel.
LED Lamp Extractor			A22NZ-A-302	Made of rubber and used to easily remove and attach LED Lamps.
Cap Tightening Wrench	0		A22Z-3908	Used to replace the Caps on Flat, Projected, and Full- guard Pushbutton Switches.

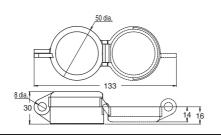
^{*} For 22.3-mm panel hole diameter.

Accessories and Tools

Dimensions (Unit: mm)

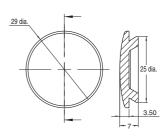
Protective Cover A22NZ-A303





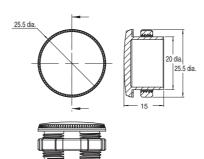






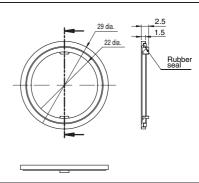
Metal Hole Plug A22NZ-A-402





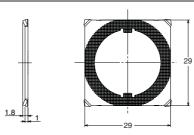
Lock Ring A22NZ-A-403



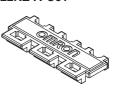


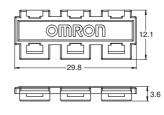
Lock Ring A22NZ-A-50501





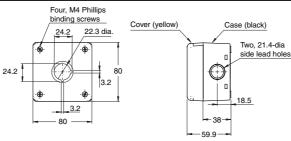
Reinforcement Plate A22NZ-A-C01

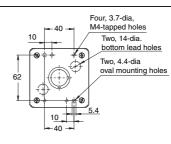




Control Box



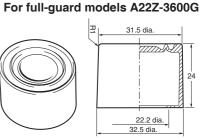




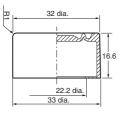
Sealing cap For Flat Models A22Z-3600F

For projection models A22Z-3600T

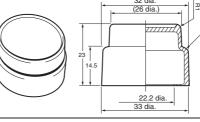




32 dia

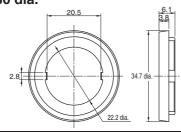






Resin Attachment for 30 dia.



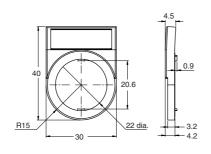


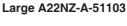
Accessories and Tools

Dimensions (Unit: mm)

Legend Plate Frames General A22NZ-A-50103

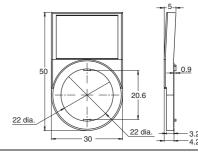








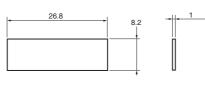
Large A22Z-3453□

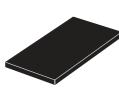


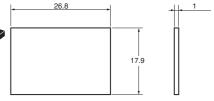
A22N/M22N/A30N

Legend Plates General A22Z-3443□-□

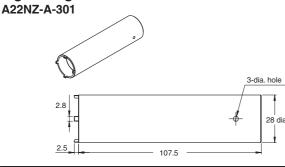




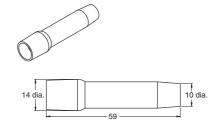




Tightening Wrench

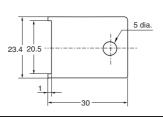


LED Lamp Extractor A22NZ-A-302



Cap Tightening Wrench A22Z-3908





Safety Precautions

Refer to Safety Precautions for All Pushbutton Switches/Indicators.

Signal Word Definitions

Precautions for Safe Use	Supplementary comments on what to do or avoid doing, to use the product safely.
Precautions for Correct Use	Supplementary comments on what to do or avoid doing, to prevent failure to operate, malfunction, or undesirable effects on product performance.

Precautions for Safe Use

For both the Screw terminal block type and the Push-In Plus terminal block type

- Do not perform wiring with power supplied to the Switch/Indicator.
 Do not touch the terminals or other charged parts while power is being supplied. Doing so may result in electric shock.
- Do not disassemble or modify the Switch/Indicator under any circumstances.
- Doing so may prevent the Switch/Indicator from functioning to its full capability. Do not drop the Switch/Indicator. Do not apply pressure that may deform or alter the Switch/Indicator.
- The durability of the Switch varies considerably depending on the switching conditions. Always test the Switch/Indicator under actual working conditions before application and use the Switch/Indicator only for the number of switching operations allowed.
- Do not allow the load voltage and current to exceed the rated value. This may damage or burn out the Switch/Indicator.
- Do not use the Switch/Indicator in locations where explosive or flammable gases or liquid may be present or scattered. The electric ark or the heat caused by switching contacts may cause a fire or explosion.
- Do not use the Switch/Indicator in locations where toxic gases, such as H₂S, SO₂, NH₃, HNO₃, and Cl₂, may be present, or in locations subject to high temperature or humidity. Doing so may damage the Switch/Indicator due to contact failure or corrosion.
- Do not use the Switch/Indicator submersed in oil or water, or in locations continuously subject to splashes of oil or water. Doing so may result in oil or water entering and damaging the Switch/ Indicator.
- Do not use or keep the Switch/Indicator under the following conditions:
 - Subject to severe temperature changes.
 - Subject to high humidity or condensation.
 - · Subject to severe vibration or shock.
 - Where direct rays of the sun strike.
 - · Where sea breeze may be present.
- Make sure that a rubber washer is present between the Operation Unit and the panel. Otherwise, the specifications of the protective structure may not be satisfied.
- Do not apply excessive force to the Switch or wiring.
 A damaged or deformed contact block may cause contact failure.
- Use an appropriate wire and ferrule.
- Exercise caution to avoid wiring errors when connecting the terminals.

• To prevent wire from smoking or igniting, use the wire indicated in the following table.

Model	Wire Type	Wire	Recommended Wires	Stripped length
A22N, M22N (Screw terminal block)	Solid wire/ stranded wire		1.25 to 2.5 mm ² / AWG 16 to 14 Solid wire: 1.6 mm max.	8 mm
A22N-P, M22N-P (Push-In Plus terminal block)		Copper	0.25 to 1.5 mm ² / AWG 24 to 16	Ferrules used : 10 mm Ferrules not used : 8 mm

Use wiring crimp terminals and ferrule terminals of the specified size.

- For Push-In Plus terminal blocks, use only one wire per terminal.
 For screw terminal blocks, use no more than two wires of the same size and type with no more than two crimp terminals per terminal.
- After storing the product for a long time exceeding 1 year, perform, at a minimum, inspections of the operating characteristics, contact resistance, insulation resistance, and dielectric strength as well as evaluate the product under the working conditions.
- This Switch/Indicator is intended for indoor use only.
 Using the Switch/Indicator outdoors may result in failure.

Push-In Plus Terminal Blocks

- Do not wire anything to the release holes.
- Do not tilt or twist a flat-blade screwdriver while it is inserted into a release hole on the terminal block. The terminal block may be damaged.
- Insert a flat-blade screwdriver into the release holes at an angle.
 The terminal block may be damaged if you insert the screwdriver straight in.
- Do not allow the flat-blade screwdriver to fall out while it is inserted into a release hole.
- Do not bend a wire past its natural bending radius or pull on it with excessive force.
 - Doing so may cause the wire disconnection.
- Do not insert more than one wire into each terminal insertion hole.
- Do not mount A22N-P Push-In Plus terminal contact blocks on A22N screw terminal blocks. Doing so may result in unsatisfactory performance.

Precautions for Correct Use

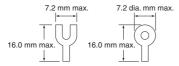
Mounting

 Do not tighten the Mounting Nut more than necessary using tools such as pointed-nose pliers. Doing so will damage the Mounting Nut. (The tightening torque of the Mounting Nut is 1.0 to 2.0 N·m.)

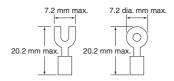
Wiring (Screw terminal block)

- Terminal screws must be M3.5 Phillips or slotted screws with a square washer.
- The terminal screw tightening torque is 1.0 to 1.3 N·m.
- Solid wires, stranded wires, and crimp terminals can be connected to the Switch/Indicator.

Bare Crimp Terminals



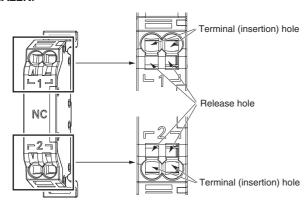
Crimp Terminals with Insulating Sheathes



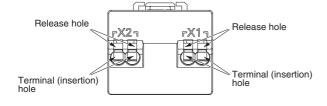
Wiring (Push-in Plus terminal block)

1. Connecting Wires to the Push-In Plus Terminal Block

Part Names of the Terminal Block <A22N>



<M22N>



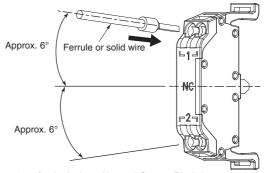
Connecting Wires with Ferrules and Solid Wires

 Insert the solid wire or ferrule straight into the terminal block until the end strikes the terminal block. The angle should be approximately 6°.

A22N/M22N/A30N

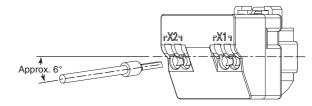
 If a wire is difficult to connect because it is too thin, use a flat-blade screwdriver in the same way as when connecting stranded wires.

<A22N>



The wiring for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

<M22N>

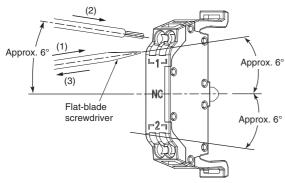


Connecting Stranded Wires

Use the following procedure to connect the wires to the terminal block.

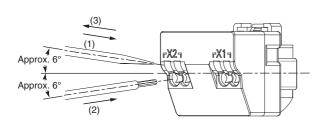
- 1. Hold a flat-blade screwdriver at an angle and insert it into the
 - The angle should be approximately $6^{\circ}.$ If the flat-blade screwdriver is inserted correctly, you will feel the spring in the release hole.
- With the flat-blade screwdriver still inserted into the release hole, insert the wire into the terminal hole until the end strikes the terminal block
- 3. Remove the flat-blade screwdriver from the release hole.

<A22N>



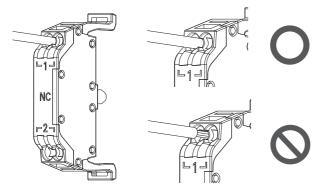
The wiring and screwdriver angles for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

<M22N>



Checking Connections

- After the insertion, pull gently on the wire to make sure that it will not come off and it is securely fastened to the terminal block.
- To prevent short circuits, insert the stripped part of a stranded or solid wire, or the conductor part of a ferrule until it is hidden inside the terminal insertion hole. (See the following diagram.)

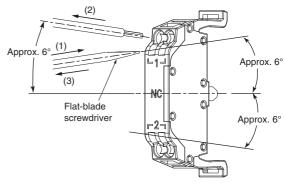


2. Removing Wires from the Push-In Plus Terminal Block

Use the following procedure to remove wires from the terminal block. The same method is used to remove stranded wires, solid wires, and ferrules

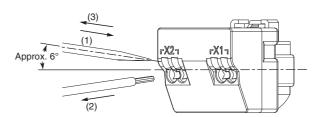
- Hold a flat-blade screwdriver at an angle and insert it into the release hole. The angle should be approximately 6°.
- With the flat-blade screwdriver still inserted into the release hole, remove the wire from the terminal insertion hole.
- 3. Remove the flat-blade screwdriver from the release hole.

<A22N>



The wiring and screwdriver angles for the Lighting Unit and Contact Block (2 contacts) are the same as for the Contact Block (1 contact) shown in the above illustration.

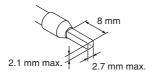
<M22N>



3. Recommended Ferrules and Crimp Tools Recommended ferrules

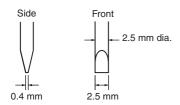
	cable ire	Ferrule Conductor	Reco	mmended fe	rrules
(mm²)	(AWG)	Length (mm)	Phoenix Contact product	Weidmuller product	Wago product
0.25	24	8	AI0.25-8	H0.25/12	FE-0.25-8N-YE
0.34	22	8	AI0.34-8	H0.34/12	FE-0.34-8N-TQ
0.5	20	8	AI0.5-8	H0.5/14	FE-0.5-8N-WH
0.75	18	8	AI0.75-8	H0.75/14	FE-0.75-8N-GY
1	18	8	AI1-8	H1.0/14	FE-1.0-8N-RD
1.5	16	8	AI1.5-8	H1.5/14	FE-1.5-8N-BK
Recommended Crimp Tools		CRIMPFOX6 CRIMPFOX6T-F CRIMPFOX10S	PZ6 roto	Variocrimp4	

- **Note: 1.** Make sure that the outer diameter of the wire coating is smaller than the inner diameter of the insulation sleeve of the recommended ferrule.
 - 2. Make sure that the ferrule processing dimensions conform to the following figures.



Recommended Flat-Blade Screwdrivers

Use a flat-blade screwdriver to connect and remove wires.
Use one of the following flat-blade screwdrivers.
The following table shows manufacturers and models as of 2015/Dec.



Model	Manufacturer
ESD0.40 x 2.5	Wera
SZS 0.4 x 2.5 SZF 0-0.4 x 2.5 *	Phoenix Contact
0.4 x 2.5 x 75 302	Wiha
AEF.2.5 x 75	Facom
210-719	Wago
SDI 0.4 x 2.5 x 75	Weidmuller

- $^{\star}\,$ OMRON's exclusive purchase model XW4Z-00B is available to order as SZF 0-0.4 x 2.5 (manufactured by Phoenix Contact).
- After wiring the Switch/Indicator, provide a sufficient insulation distance.

The following information applies to both screw terminal blocks and Push-In Plus terminal blocks.

A22N/M22N/A30N

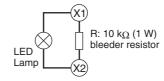
LED Lamps

- A current-limiting resistor is built in the LED lamp, so the installation of an external resistance is not required.
- Lighting malfunction of the LED lamp
 A micro-current of approximately 0.1 mA or less is sufficient to turn
 on the LED lamps. Take a countermeasure like adding a resistor
 to prevent mis-lighting in parallel to the LED lamp.

 The micro-current varies with the machine (leak current or stray)

The micro-current varies with the machine (leak current or stray capacity between cables, etc.). Select resistance value and allowable power consumption that meet the actual current.

(Example of lighting malfunction prevention circuit) When using a 24-VAC/VDC lighted unit



Key-Type Selector Switches

 Make sure to insert the key to the bottom of the cylinder before turning it.

Application

Mounting to the Panel

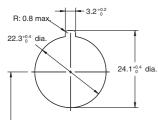
Panel Hole Dimensions

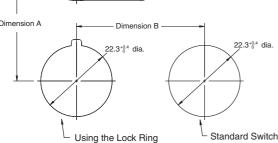
- Panel hole dimensions are given below.
- The recommended panel thicknesses are given below.

Panel hole dimension	Panel thickness
22.3 dia.	0.8 to 5 mm
25.5 dia.	0.8 to 6 mm

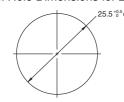
- If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.
- The following figure gives pitch dimension A and pitch dimension B between the centers of the mounting holes.

Panel Hole Dimensions for 22.3 Diameter





Panel Hole Dimensions for 25.5 Diameter



Dimension A

Wire type	Number of linked Contact Blocks	Number of wires per terminal	Minimum allowable pitch Dimension A (mm) or larger
Leads (stranded wire / solid wire)	1	1	50
Bare crimp terminals	1	1	50
Crimp terminals with insulating sheathes	1	1	60

Note: The minimum mounting pitch is based on three Contact Blocks in stage 1 with one wire attached to each terminal. If the Mounting Collar lock levers all face the same direction at the minimum mounting pitch, be sure to note the order the mounting collars are attached to the Operation Unit. If you attach two wires or link Units, determine the mounting pitch based on the dimensions diagrams and ease of operation

Dimension A When Using Accessory

- Dimension A is 50 mm minimum when a Standard Legend Plate Frame is attached.
- Dimension A is 51 mm minimum when a Large Legend Plate Frame is attached.
- Dimension A is 75 mm minimum when a Protective Cover is attached.

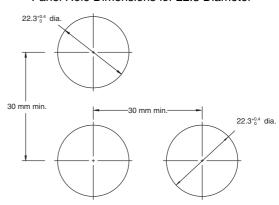
Dimension B

Operation Unit shape	Dimension B
Mushroom	40 mm min.
Other than the above	30 mm min.

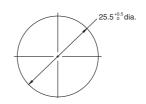
<M22N>

- · Panel hole dimensions are given below.
- Acceptable panel thickness is between 0.8 and 6 mm.
- If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.

Panel Hole Dimensions for 22.3 Diameter



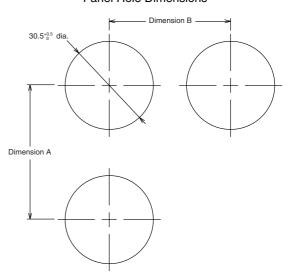
Panel Hole Dimensions for 25.5 Diameter



<A30N>

- Panel hole dimensions are given below.
- Acceptable panel thickness is between 0.8 and 7 mm.
- If outer surface treatment such as coating is performed for the panel, the panel dimensions after outer surface treatment must meet the specified panel dimensions.
- · The following figure gives pitch dimension A and pitch dimension B between the centers of the mounting holes.

Panel Hole Dimensions



Dimension A

Wire type	Number of linked Contact Blocks	Number of wires per terminal	Minimum allowable pitch Dimension A (mm) or larger
Leads (stranded wire / solid wire)	1	1	50
Bare crimp terminals	1	1	50
Crimp terminals with insulating sheathes	1	1	60

Note: The minimum mounting pitch is based on three Contact Blocks in stage 1 with one wire attached to each terminal. If the Mounting Collar lock levers all face the same direction at the minimum mounting pitch, be sure to note the order the mounting collars are attached to the Operation Unit. If you attach two wires or link Units, determine the mounting pitch based on the dimensions diagrams and ease of operation and wiring.

Dimension B

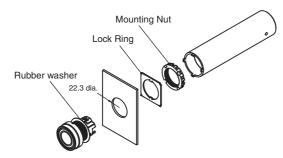
Operation Unit shape	Dimension B
Mushroom	40 mm min.
Other than the above	30 mm min.

Mounting the Operation Unit

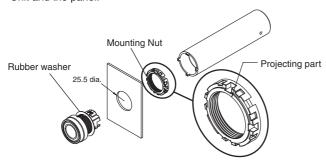
<A22N>

• Panel Hole of 22.3-mm Diameter

Insert the Operation Unit from the front of the panel, insert the Lock Ring and Mounting Nut from the back of the panel, and tighten the Mounting Nut. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.



Panel Hole of 25.5-mm Diameter
 Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part (see following figure) on the Mounting Nut is aligned with mounting hole. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.

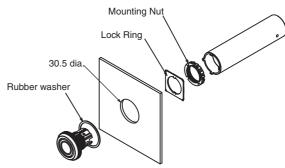


 Align the Lock Ring with the slot on the case and insert it so that the edge is flush with the panel.

<A30N>

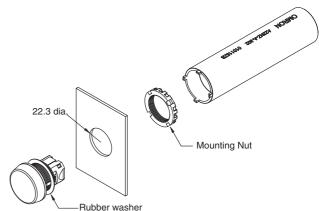
 Insert the Operation Unit from the front of the panel, insert the Lock Ring and Mounting Nut from the back of the panel, and tighten the Mounting Nut. Before tightening, check that the rubber washer is present between the Operation Unit and the panel.

A22N/M22N/A30N

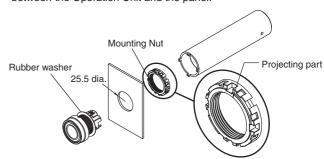


Attaching the Switch Unit to the Indicator Unit <M22N>

Panel Hole of 22.3-mm Diameter
 Insert the Indicator Unit from the front of the panel, insert the
 Mounting Nut from the back of the panel, and tighten the Mounting
 Nut. Before tightening, check that the rubber washer is present
 between the Indicator Unit and the panel.

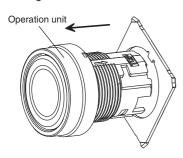


Panel Hole of 25.5-mm Diameter
 Tighten the Mounting Nut while confirming that the projecting part
 (see following figure) on the Mounting Nut is aligned with mounting
 hole. Before tightening, verify that the rubber washer is present
 between the Operation Unit and the panel.

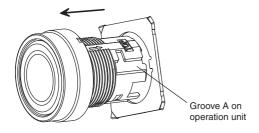


Mounting the Lock Ring <A22N/A30N>

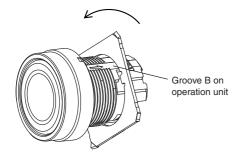
 Align the grooves on the Operation Unit with the protruding parts of the Lock Ring and mount.



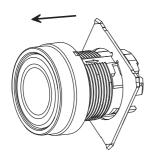
- When experiencing difficulties when mounting a Lock Ring, use the following procedure.
 - 1. Insert the Lock Ring into groove A on the Operation Unit.



When the Lock Ring is in the position shown in the figure below, rotate it to insert the protruding part of the Lock Ring into groove B on the Operation Unit.

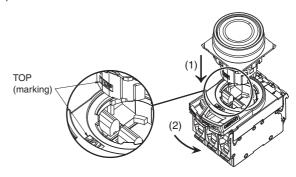


3. When the Lock Ring is in the position shown in the figure below, move it in the direction indicated by the arrow.



Mounting the Contact Block to the Operation Unit <A22N/A30N>

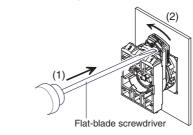
 Insert the Operation Unit into the Mounting Collar, aligning the TOP mark inscribed on the Operation Unit with the lever on the Mounting Collar, and then turn the lever in the direction indicated by the arrow in the following figure all of the way until it clicks into place.

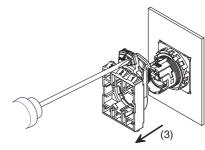


Removing the Mounting Collar

<A22N/A30N>

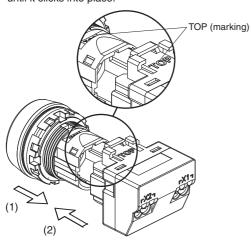
 Press the lock lever in from the back side to release the lock, and then hook the Mounting Collar with a screwdriver, move it in the direction indicated at (2), and remove it. Turn the lever all of the way until it clicks into place.





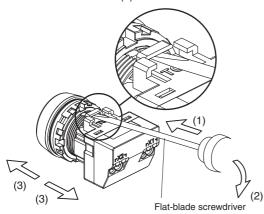
Attaching the Switch Unit to the Indicator Unit <M22N>

 Align the "TOP" marks on the Indicator Unit and Switch Unit and insert the Indicator Unit into the Switch Unit. Insert it all the way until it clicks into place.



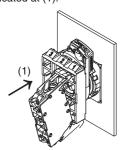
Removing the Switch Unit <M22N>

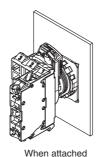
 Insert a screwdriver into the tab on the Switch Unit. Move the screwdriver in direction (2) to remove the Switch Unit.



Contact Block and Lighting Unit Attaching the Contact Block and Lighting Unit

• Catch the projection on the opposite side of the Mounting Collar from the lever side and press the Contact Block in the direction indicated at (1).

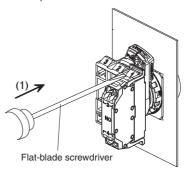


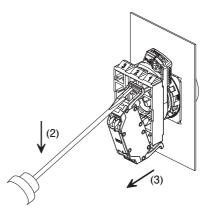


Removing the Contact Block

 Insert a screwdriver into the gap between the Mounting Collar and Contact Block and press it inward in the direction shown at (2).

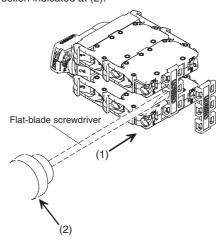
A22N/M22N/A30N





Attaching the Reinforcement Plate (Screw terminal block type)

• To link Contact Blocks together, attach a Reinforcement Plate in the direction shown in the following figure. To remove the Plate, insert a screwdriver in the direction indicated at (1) and rotate it in the direction indicated at (2).



Indicators M22N

A22N/M22N/A30N

Engraving

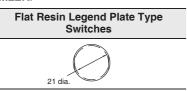
(Except for Non-Lighted / Opaque Types)

- Engrave legends on the Legend Plates.
 Do so with the straight part of the Legend Plate positioned on the right and left.
- The characters must be engraved no deeper than 0.5 mm. Use an alcohol-based paint, such as a melamine, phthalic acid, or acrylic resin based paint.

<A22N>

Projected, Full-guard, or Mushroom Switches	Flat Switches
15.4 dia.	17.7 dia.

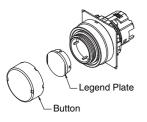
<M22N>



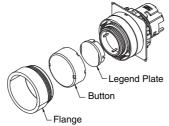
Attaching Character Films (Except for Non-Lighted / Opaque Types) <A22N>

 To attach a character film, remove the Button and attach the film, aligning it with the straight portions of the Legend Plate.

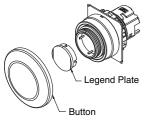
Projected Switches



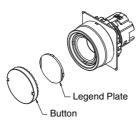




Mushroom Switches



Flat Switches

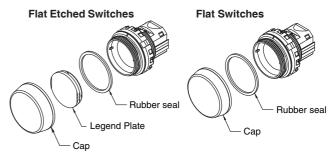


 Prepare films of the following sizes depending on the type of Legend Plate.

Projected, Full-guard, or Mushroom	Legend Plate dimensions	Display range 15.4 dia. 1.6 5.15 1.5.9 dia.
Switches	Film dimensions	17.1 $^{\circ}_{-0.2}$ dia. 17.1 $^{\circ}_{-0.2}$ dia. T = 0.1 to 0.2 mm
Flat Switches	Legend Plate dimensions	Display range 17.7 dia. 1.30
i iai Switches	Film dimensions	19.6° _{0,2} dia. 17.5° _{0,2} T = 0.1 to 0.2 mm

∠M22N

 To attach a character film, remove the Button and attach the film, aligning it with the straight portions of the Legend Plate.



Semi-spherical Switches



Projected Switches

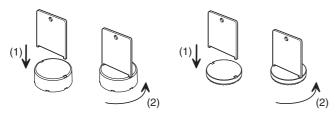


 Film processing dimensions should be as per the indications below.

Legend Plate dimensions	21 dia: 1
Film dimensions	22.7% dia. 20.8% T=0.1 to 0.2 mm

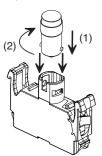
Removing and Tightening the Cap

For all Switches except for Mushroom Switches, use the A22Z-3908 Cap Tightening Tool to loosen the cap. When you tighten the cap, make sure that the Legend Plate is in the correct position and then turn the cap in the direction opposite of the direction shown in the following figure. Tighten it to a torque of 0.5 to 1.0 N·m so that it will not become loose.



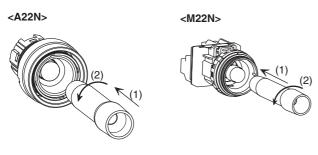
Attaching the LED Lamp to the Lighting Unit

 Insert the protrusions on the LED Lamp into the guides on the Lighting Unit and then turn the LED Lamp in direction (2) to lock it in place.



Attaching and Replacing LED Lamps Removing the LED Lamp from the Panel Surface

 Insert the LED Lamp Extractor as shown in the following figure and then rotate the Extractor in the direction shown at (2) while pressing it inward.

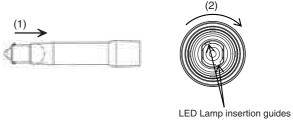


Attaching the LED Lamp from the Panel Surface

 Insert the LED Lamp into the LED Lamp Extractor as shown in the following figure. Align the projections on the LED Lamp with the LED Lamp insertion guides, insert the LED Lamp, and turn it in the direction indicted at (2).

A22N/M22N/A30N

<A22N>

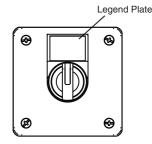


<M22N>



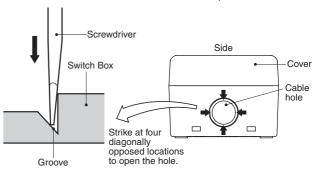
Control Box

You can attach a Legend Plate Frame. Attach it in the direction shown in the following figure. Mount the Switch in the same way as for a standard panel. The tightening torque of the Box screws is 1.4 to 2.0 N·m.



Creating a Cable Hole

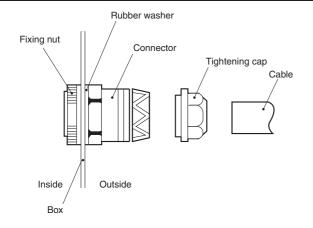
To open a cable hole, leave the cover attached, place the tip of a screwdriver in the grooves at four locations around the cable hole, and strike the screwdriver with a hammer to open the hole.



Securing the Connector Cable

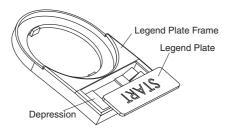
- Insert the connector into the cable port hole in the Box and secure with the fixing nut inside the box.
- 2. Open a hole in the thin rubber section of the rubber ring.
- 3. Pass the tightening cap through the cable, insert the cable into the connector, and tighten the hexagonal nut to secure the cable.

Cable diameter (mm)	Connector
7 to 9 dia.	A22Z-3500-1
9 to 11 dia.	A22Z-3500-2



Attaching and Removing Legend Plates

- Press the Legend Plate into the depression in the Legend Plate Frame. The Legend Plate Frame can be separate or it can be mounted on the panel when you attach the Legend Plate.
- The direction of the characters will depend on the mounting direction of the Operation Unit if the Switch is a Selector Switch or Key Selector Switch.



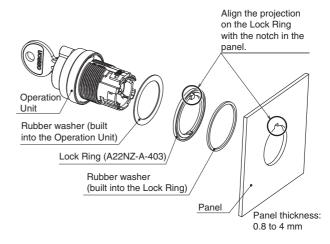
- You can easily remove the Legend Plate by pressing it forwards from the back of the Legend Plate Frame.
- The acrylic plastic Legend Plate is easily damaged by shock.
 Handle it with care.



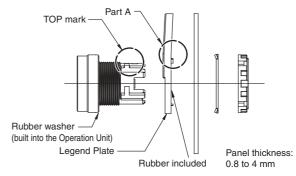
Attaching the Lock Ring

Attach the Lock Ring as shown in the following figure.

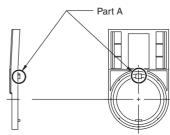
To ensure water resistance, attach the rubber washer in the specified location



 Align the TOP mark on the Operation Unit, part A on the Legend Plate, and the notch in the panel, and insert the Operation Unit.

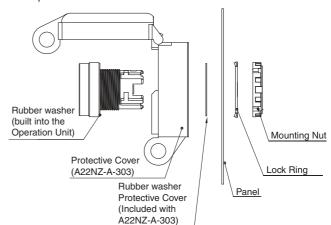


 If there is no notch in the panel, remove part A from the Legend Plate with pliers.



Attaching the Protective Cover

Attach the Protective Cover (A22NZ-A-303) to a panel that is 0.8 to 1.0 mm thick. To ensure water resistance, attach the rubber washer in the specified location.



Attaching the Sealing Cap

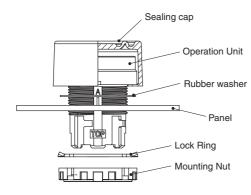
<A22N/M22N>

· Panel acceptable thickness is given below.

Panel hole din	nension	Panel thickness
22.3 dia	a.	0.8 to 4.2 mm
25.5 dia	a.	0.8 to 5.2 mm

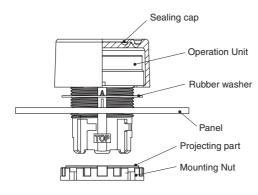
Panel Hole of 22.3-mm Diameter

Attach the Sealing cap as shown in the following figure. To ensure water resistance, attach the rubber washer in the specified location.



Panel Hole of 25.5-mm Diameter

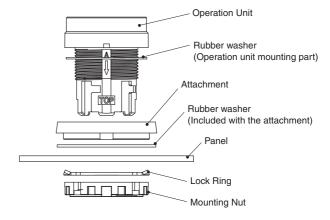
Attach the Sealing cap as shown in the following figure. Do not use the Lock Ring, and tighten the Mounting Nut while confirming that the projecting part on the Mounting Nut is aligned with mounting hole. To ensure water resistance, attach the rubber washer in the specified location.



Mounting the 30-dia. Resin Attachments

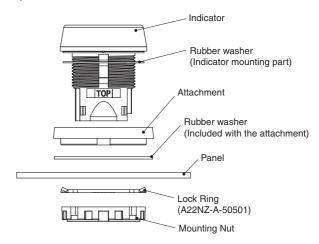
A22N/M22N/A30N

- Acceptable panel thickness is between 1.8 and 2.2 mm.
- Mount the attachment as shown in the following figure.
- To ensure water resistance, attach the rubber washer in the specified location.



<M22N>

- Acceptable panel thickness is between 1.8 and 2.2 mm.
- Mount the attachment as shown in the following figure.
- Purchase and mount a separate lock ring (A22NZ-A-50501).
- To ensure water resistance, attach the rubber washer in the specified location.



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